Comments on Save our Future Bill
Gary Latshaw, Ph.D. July 11, 2021

The bill would be ineffective in reducing CO2. The fees are too small to influence decision makers to move away from carbon sources. It does not address the major need to get off carbon: infrastructure to support more electric generation, EV charging, and upgrading the electric grid.

July 2nd NY Times article describes Ro Khanna's threat to have the oil company executives testify to his energy and environment subcommittee. According to the article, Exxon chief executive, said the company had "a firm commitment that carbon pricing is important to addressing climate change." Other testimony earlier in June demonstrated that the Oil Companies do not want to lose their tax breaks. . Exxon has apparently felt the necessary fee to cause switching is $2000/ton CO2 or $20/gallon of gas. This is a far greater number than this bill proposes.

It is easy to approximate the impact of a CO2 fee on gasoline prices[1]. The proposed $54/ton of CO2 translates to about a fee of fifty cents per gallon. It would grow at 6% annually which would mean about $100/ton (or a fee of $1/gallon of gas) in ten years. This is relatively small and is more like the seasonal variations that we get.

While it is proper that the bill identifies climate pollutants other than CO2 and assigns fees for those pollutant, this does not reconcile with the fact that SO2 (which is assigned a fee) encourages COOLING. This is recognized in the attached chart from a recent IPCC report. If you examine the chart, you will see SO2 (sulfates) listed on the third row. Its color is a greenish yellow and it shows up on the negative portion of the chart. From the chart, it looks like it produces a negative 0.5 W/m2. This is because SO2 forms particles in the atmosphere, which in turn reflect sunlight back on earth. Thus, SO2 produces cooling. A second chart shows how temperature has changed over the last few centuries and notable cooling was observed during volcanic eruptions, which inject tons of SO2 into the atmosphere. That said, breathing SO2 has negative health effects, but including it as a climate pollutant is not good science.

While many academic papers produce projections favoring fees and taxes, in the real world they don't seem to work. I say this based on reading "Making Climate Policy Work" by Cullenward and Victor; "Designing Climate Solutions" by Hal Harvey, "Policy Insights from the EMF32 study on US Carbon Tax Scenarios" by Barron, etal., and "The British Columbia Carbon Tax, a failed experiment in market-based solutions to climate change" by Food&Water Watch (201. I should add that the House Committee on Climate Solutions's June 2020 report ("Solving the Climate Crisis") was very wary of fees and taxes while supporting a wide range of other policies on incentives, investments, portfolio standards, etc.

[1] One gallon of gas produces about 20lb of CO2. This could be restated as one gallon of gas produces one-hundredth a ton of CO2. So at $54/ton of CO2 the fee would be $54/100 ~ fifty cents.

Public Comment Received July 12, 2021 at 1:33pm for EC Meeting Item 2

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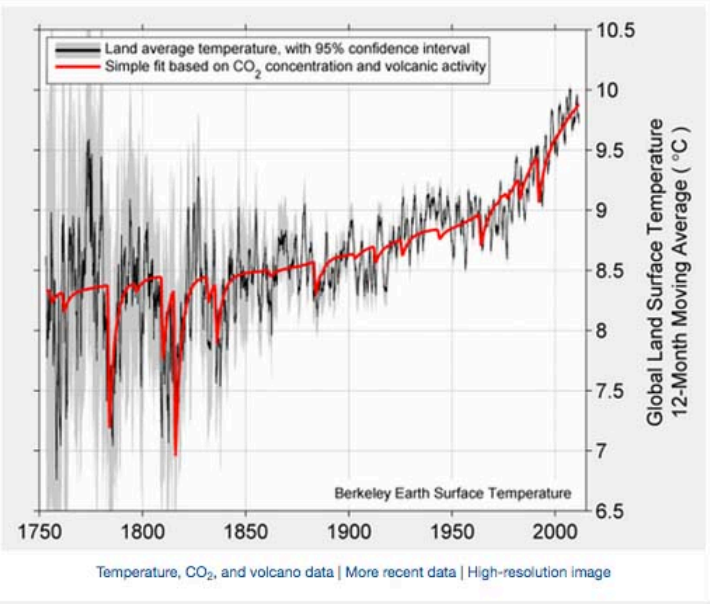
Human Effect

http://berkeleyearth.org/summary-of-findings/

Many of the changes in land-surface temperature can be explained by a combination of volcanoes and a proxy for human greenhouse gas emissions. Solar variation does not seem to impact the temperature trend.



Temperature, CO_2, and volcano data | More recent data | High-resolution image

This is from the Berkeley Earth Program at UCB. The founder was originally a climate denier, but believed in the scientific method of investigating.

Other graphs and papers are available at the website.

Graph from Berkeley Earth which shows the implications of a simple model comprised of CO2 forcing and Volcanic emissions (largely SO2) cooling.

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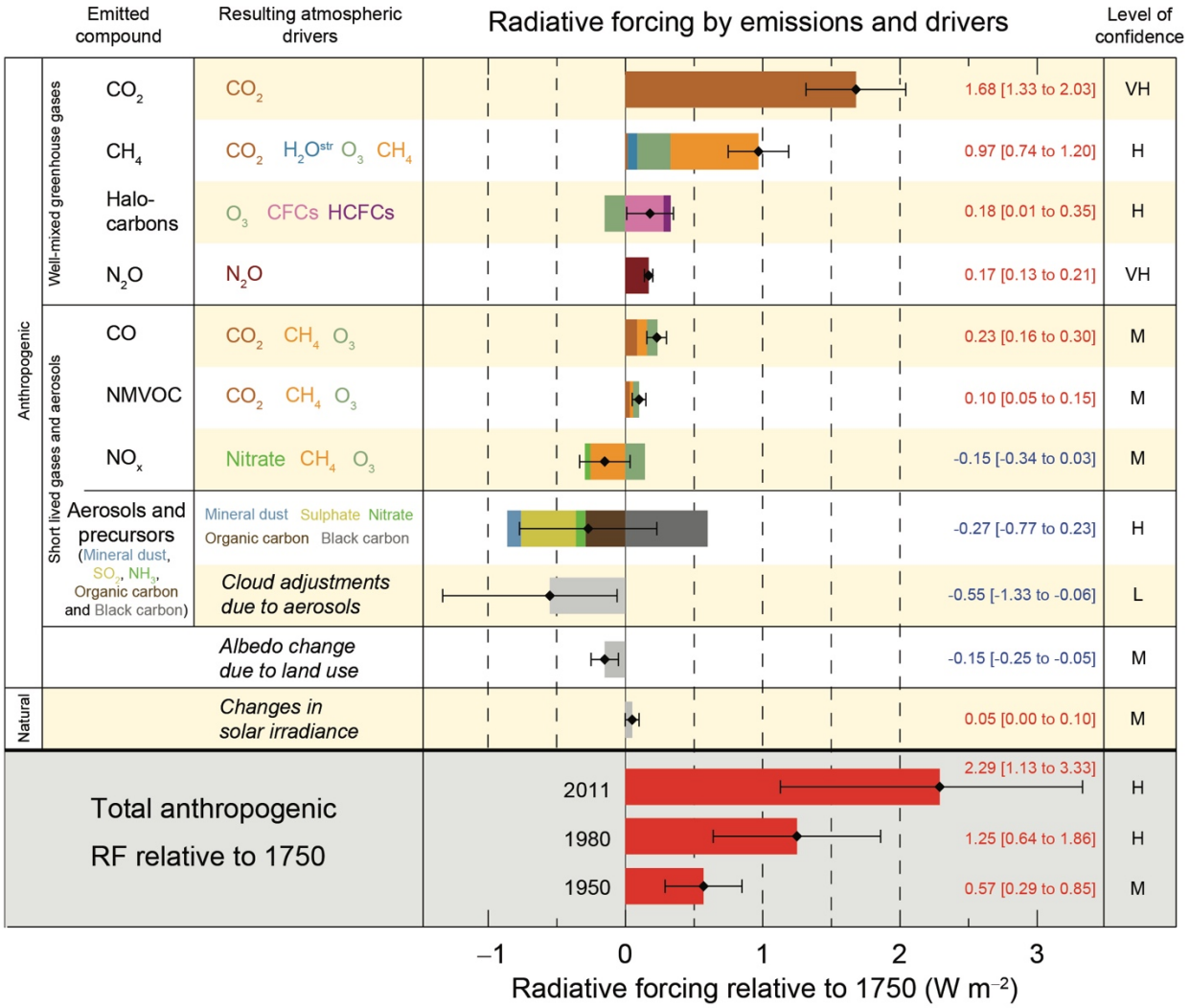
IPCC



IPCC Graph showing the forcing by various climate pollutants. Note that SO2 (sulfates) has a negative forcing, which means it actually produces cooling.